

CLAIMS

- The embodiments of the invention in which an exclusive property or right is claimed are defined as follows. Having thus described the invention
- 5 what is claimed is:
1. A switch enclosure apparatus, comprising:
- an enclosure having a plurality of walls from which a cavity and at
10 least one slot are formed;
- a plunger comprising at least one key portion, wherein said plunger is partially located and maintained within said cavity of said enclosure; and
- 15 at least one slot formed from at least one wall of said enclosure for engaging said at least one key portion of said plunger.
2. The apparatus of claim 1 wherein said plunger comprises a shape in a form of a shaft.
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3. The apparatus of claim 1 wherein at least one wall of said plurality of walls comprises an opening which can be covered by a removable mating cover.
- 25 4. The apparatus of claim 3 further comprising a protruding portion configured from said mating cover for engaging said at least one slot.
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5. The apparatus of claim 1 further comprising a bushing formed from said at least one wall of said enclosure, wherein said bushing surrounds said plunger when said plunger is placed into said cavity of said enclosure through an opening of said enclosure.

6. The apparatus of claim 5 wherein said at least one slot comprises a first slot and a second slot, wherein said second slot is positioned at an angle to said first slot, such that said at least one key portion is aligned initially with said first slot and said plunger is thereafter inserted through said 5 bushing, followed by a rotation of said plunger until said at least one key portion is aligned with said second slot, thereby providing a surface to which said plunger stops against.
7. The apparatus of claim 6 wherein said second slot comprises a depth 10 that is longer than a maximum plunger travel of said plunger to prevent said plunger from rotating back to a point where said key portion is aligned with said first slot, thereby preventing disengagement of said plunger from said enclosure.
- 15 8. A switch enclosure apparatus, comprising:
- an enclosure having a plurality of walls from which a cavity and at least one slot are formed;
- 20 a plunger comprising an undercut portion, wherein said plunger is formed in the shape of a shaft and is partially located and maintained within said cavity of said enclosure; and
- a removable mating cover for engaging said enclosure at an opening 25 formed from at least one side wall of said plurality of walls, wherein said cover comprises a protruding portion which surrounds and engages said plunger at said undercut portion, thereby providing a stop for said plunger to prevent said plunger from disengaging from said enclosure.
- 30 9. The apparatus of claim 8 wherein at least one wall of said plurality of walls comprises a circular opening through which a portion of said plunger protrudes from said enclosure.

10. The apparatus of claim 9 wherein said plurality of walls of said enclosure comprises a top wall, a bottom wall and four side walls, wherein said circular opening is formed from said top wall such that said circular 5 opening forms a portion of a bushing formed from said top wall of said enclosure.

11. A switch enclosure method, comprising:

10 providing an enclosure having a plurality of walls from which a cavity and at least one slot are formed;

locating a portion of said plunger within said enclosure, wherein said plunger comprises at least one key portion, wherein said plunger is partially 15 located and maintained within said cavity of said enclosure; and

engaging at least one slot formed from at least one wall of said enclosure with said at least one key portion of said plunger.

20 12. The method of claim 11 further comprising configuring said plunger in a form of a shaft.

13. The method of claim 11 further comprising forming an opening from at least one wall of said plurality of walls, wherein said opening can be covered 25 by a removable mating cover.

14. The method of claim 13 further comprising providing a protruding portion configured from said mating cover for engaging said at least one slot.

30 15. The method of claim 11 further comprising providing a bushing formed from said at least one wall of said enclosure, wherein said bushing surrounds said plunger when said plunger is placed into said cavity of said enclosure

through an opening of said enclosure.

16. The method of claim 15 wherein said at least one slot comprises a first slot and a second slot.

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17. The method of claim 16 further comprising:

positioning said second slot at an angle to said first slot;

10 aligning that said at least one key portion with said first slot

thereafter inserting said plunger through said bushing; and

15 thereafter rotating said plunger until said at least one key portion is aligned with said second slot, thereby providing a surface to which said plunger stops against.

20 18. The method of claim 17 wherein said second slot comprises a depth that is longer than a maximum plunger travel of said plunger to prevent said plunger from rotating back to a point where said key portion is aligned with said first slot, thereby preventing disengagement of said plunger from said enclosure.

25 19. The method of claim 13 further comprising:

configuring said plunger to comprise an undercut portion;

30 engaging said undercut portion of said plunger with a protruding portion of said cover which surrounds said undercut portion of said plunger to maintain said plunger within said enclosure.

20. The method of claim 19 wherein said protruding portion of said

plunger extends from said cover in a direction perpendicular to said cover.